

B1  
for controlling said motor, a reduction gear train connected to said motor, a worm attached to said gear train, a worm gear engaged with said worm, a spool connected to said worm gear to which is attached one end of the cable with the other end of the cable affixed to the other brace segment so that operation of the motor shortens or lengthens the cable in order to tighten or loosen the brace.

---

Claim 5. (amended) A back brace apparatus comprising: a brace body adapted to be wrapped around the trunk of a patient, said brace body comprising two separate segments; means at the end of each brace segment for allowing the two ends to be detachably connected together around the patient's trunk; and,

B2  
means for automatically tightening the brace comprising a cable operatively connected to said two segments, a motor operatively connected to apply tension to said cable, means for controlling said motor, and [The back brace apparatus as set forth in claim 4, further comprising] a set of pulleys mounted on each brace segment with the cable running through a pulley on each segment in alternation, shortening of the cable pulling the two brace segments together and tightening the brace with the aid of a mechanical advantage dependent upon the number of pulleys mounted on each brace segment.

---

Claim 7. (amended) A back brace apparatus comprising:  
a brace body adapted to be wrapped around the trunk of a  
patient, said brace body comprising two separate segments;  
means at the end of each brace segment for allowing the two  
ends to be detachably connected together around the patient's  
trunk; and,  
means for automatically tightening the brace comprising a  
cable operatively connected to said two segments, a motor  
operatively connected to apply tension to said cable, means for  
63 controlling said motor [The back brace apparatus as set forth in  
claim 1 further] comprising[:] a microprocessor for controlling the  
operation of the motor by controlling the number of revolutions  
made by the motor; and means for inputting the number of  
revolutions made by the motor into the microprocessor; [and]  
wherein the microprocessor can store for later recall the  
number of revolutions made by the motor, the stored number thereby  
constituting a position setting for the brace.

Claim 8. (amended) A back brace apparatus comprising:  
a brace body adapted to be wrapped around the trunk of a  
patient, said brace body comprising two separate segments;  
means at the end of each brace segment for allowing the two  
ends to be detachably connected together around the patient's  
trunk;  
means for automatically tightening the brace comprising a  
cable operatively connected to said two segments, a motor

operatively connected to apply tension to said cable, and means for controlling said motor; and [The back brace apparatus as set forth in claim 1, further comprising]

B3 means for automatically loosening the brace tension when the brace is taken off of a user comprising means to periodically sense the tension of the brace, means to store information of a last user input, means to compare tension of the brace with what it should be in accordance with the last user input, and means for spreading the brace segments when the tension sensed is substantially less than what it should be in accordance with the last user input.

Claim 11. (twice amended) A back brace apparatus comprising:

a brace body adapted to be wrapped around the trunk of a patient, said brace body comprising two separate segments;

B4 means at the end of each brace segment for allowing the two ends to be detachably connected together around the patient's trunk;

means for automatically tightening the brace comprising a cable operatively connected to said two segments, a motor operatively connected to apply tension to said cable, and means for controlling said motor; [The back brace apparatus as set forth in claim 1, further comprising]

means for determining whether user has removed said brace without loosening the tension setting and for operating said means for controlling said motor to loosen said cable[,]; and